

telecommunications-related products and services.¹⁴³ Indeed the Commission itself has specifically characterized inside wiring as a "facility," and thus not a "service."¹⁴⁴

This analysis is not altered by the Congressional charge that "[t]he Commission shall establish competitively neutral rules -- to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services" for school classrooms, libraries, and health care providers.¹⁴⁵ The congressional mandate is limited to enhancing "access" to and support for "telecommunications and information services." The use of an entirely different formulation, "access to" rather than "provision of," suggests that the two goals are not coextensive. Telecommunications services are to be provided; however, only access to, not the advanced services themselves, is required here. Such access, of course, is to be provided through subsidization of the telecommunication services used for that purpose.

In addition to its inconsistency with the statutory language, the *Recommended Decision* has serious policy weaknesses as well. If the Commission were to conclude that inside wiring and Internet service provider fees were supportable as universal services, the Commission may seriously disrupt the competitive markets currently

¹⁴³ See, e.g., § 153(45) (defining network element); (50) (defining telecommunications equipment); (48) (defining telecommunications); (51) (defining telecommunications service).

¹⁴⁴ *Detariffing Order*, Although installation and maintenance may have been described in lay terms as services, they are not "telecommunications services" under the 1996 Act.

¹⁴⁵ § 254(h)(2)(A).

offering these and related products and services. Indeed the Joint Board adopted a sweeping definition of inside wiring that included such deregulated customer premises equipment as "routers, hubs, network file servers, and wireless LANs."¹⁴⁶ Yet, the 1996 Act specifically limits recipients of universal service support to "eligible telecommunications carrier[s] designated under section 214(e)."¹⁴⁷ Thus many current providers of Internet services and inside wiring seemingly would not qualify as an "eligible telecommunications carrier." Conversely some LECs may not even offer these services at this time, but may now enter this market with the practical assurance that only they can offer public institutions discounts. The *Recommended Decision's* conclusion thus will steer public institutions toward *Eltel* providers and away from full-priced competitors. This cannot have been the congressional intent.¹⁴⁸

The Joint Board's reasoning also proves too much. In support of its decision to include inside wiring in universal service support, the Joint Board found that such wiring was a critical element in achieving the goals of § 254(h).¹⁴⁹ However, there are any

¹⁴⁶ *Recommended Decision* at ¶ 477; see *Second Computer Inquiry Final Decision*, 77 FCC 2d 384, 438-447 modified on recon., 84 FCC 2d 50 (1980), further modified on recon., 88 FCC 2d 512 (1981), *aff'd sub. nom., Computer and Communications Indus. Ass'n. v. FCC*, 693 F.2d 198 (D.C. Cir. 1982), *cert. denied*, 461 U.S. 938 (1983), *aff'd on second further recon.*, FCC 84-190 (1984).

¹⁴⁷ § 254(e).

¹⁴⁸ Similarly, the *Recommended Decision* (at ¶ 463) holds that Internet service providers should be entitled to a universal service subsidy in part because their services are not "content services." Yet all Internet service providers provide "content services" and efforts to distinguish levels of content will only result in arbitrary and potentially discriminatory rules.

¹⁴⁹ *Recommended Decision* at ¶ 473.

number of "critical" steps that the government could take that would enhance access to advanced services. Perhaps the most productive of which would be to purchase computers for these facilities.¹⁵⁰ Other "critical" subsidies could include teacher training, Internet access fees, construction of computer labs, purchasing of modems etc. While each of these subsidies would help to achieve the congressional goal, they clearly fall outside the scope of regulated services and do not contribute to, nor should they receive support from, universal service. Therefore, the *Recommended Decision's* rationale is fatally inconsistent with the statutory scheme.¹⁵¹

Although the Joint Board also contends that inside wiring must be covered in order for the Commission's rules to be technologically neutral with wireless technologies,¹⁵² the *Recommended Decision* in fact violates this principle by targeting a subsidy (inside wiring support) to a characteristic (wiring) unique to a particular technology (wireline services). "Competitive neutrality" does not require that the Commission subsidize costs inherent to certain technologies in order to make these services "equal."¹⁵³ To the contrary, differing equipment and facility requirements form

¹⁵⁰ See, e.g., Statement of Senator Rockefeller, 141 Cong. Rec. S7978, 7981 (daily ed. June 8, 1995).

¹⁵¹ § 214(e); see also *Chong Statement* at 6. Excluding internal wiring is also consistent with the Commission's longstanding view of universal service in the residential context in which the wire inside the home or premises is the property and responsibility of the property owner.

¹⁵² *Recommended Decision* at ¶ 482.

¹⁵³ Thus wireline services have certain inherent costs (such as inside wiring) that wireless technologies may not require. Conversely, wireless technologies have other inherent costs (such as relatively expensive wireless modems) that wireline technologies do not incur.

the basis of consumer decisions, and the Commission is not required to wipe these away through universal service support in order to be competitively neutral. Rather, such choices should be made by the consumer without the distortions caused by government subsidies.

The Joint Board also sought to justify covering the installation and maintenance costs of inside wiring simply on the basis of their expense; such costs often far exceed the cost of the inside wire itself.¹⁵⁴ Quite to the contrary, the 1996 Act itself limits universal service support to enhanced access that is "technically feasible and economically reasonable."¹⁵⁵ Thus, the potentially immense financial ramifications of including inside wiring in the educational support fund cut against the Board's decision.

As Commissioner Chong pointed out, "inclusion of internal connections will cause the fund to balloon to a level much higher than may be fiscally prudent, at the expense of all consumers of telecommunications services."¹⁵⁶ Without inside wiring the cost of connections to all classrooms has been estimated at \$1.645 billion initially, and \$920 million annually thereafter. With inside wiring, the estimated total initial cost is \$7.93 billion and \$1.49 billion thereafter. *Id.* It is hard to imagine that Congress would have intended such an increase in the costs of this program, and the resulting impact on millions of customer's bills, without including any specific reference to inside wiring. The money to fund the Joint Board's far-reaching recommendations will have to be

¹⁵⁴ *Recommended Decision* at ¶ 474.

¹⁵⁵ § 254(h)(2)(A).

¹⁵⁶ *Chong Statement* at 6.

raised from the customers of all interstate telecommunications providers, undermining the 1996 Act's goals of "just, reasonable, and affordable" rates.¹⁵⁷

B. The Commission Must Permit Incumbent LECs To Bid For Packages Of Telecommunications Services That Include Interstate Services Provided To Schools And Libraries.

GTE commends the Joint Board for its recommended use of competitive bidding to choose a service provider. As the Commission is well aware, GTE has many times endorsed an auction process as an efficient, market-based, and competitively neutral mechanism that can minimize the support burden and remove the need for extensive regulatory oversight. GTE is concerned, however, that incumbent LECs would not be able to participate in such bidding if a package of services includes interstate services because of current federal tariff restrictions.¹⁵⁸ To assure a truly competitive opportunity, the Commission must not adopt a bidding process without companion action that enables incumbent LECs to respond to Request for Proposals ("RFPs").

The Commission previously has rejected attempts by incumbent LECs to file RFP-type tariffs which would provide the opportunity to respond to competitive bid requests.¹⁵⁹ The Court of Appeals recently remanded one LEC's RFP tariff to the Commission for further consideration because of the FCC's refusal to consider

¹⁵⁷ § 254(b)(2).

¹⁵⁸ The *Recommended Decision* (at ¶¶ 541, 573) clearly contemplates that interstate services will be included within requested packages of telecommunications services.

¹⁵⁹ See *Southwestern Bell Telephone Co.*, 11 FCC Rcd 1215 (1995); *GTE Telephone Operating Cos.*, 11 FCC Rcd 3698 (1995) *appl. for rev. pending*. In both cases, the proposed tariffs were found to be impermissibly vague and ambiguous and inconsistent with the requirement for geographically averaged rates.

"competitive necessity" arguments.¹⁶⁰ GTE urges the Commission to avoid the same error by considering the "competitive necessity"¹⁶¹ for a RFP tariff in connection with service to schools and libraries.

GTE submits that the bidding proposal for service to schools and libraries proposed by the *Recommended Decision* establishes the "competitive necessity" for establishing a mechanism, such as an RFP tariff, through which LECs can effectively respond. The procurement mechanism proposed by the *Recommended Decision* seeks to obtain the best possible competitive price through a mechanism open to all carriers. The requirement that the bid be no higher than the "lowest corresponding price" assures that LECs cannot overcharge, even in areas of limited competition. Regulatory restrictions applicable only to incumbent LECs, however, would severely undermine this mechanism by limiting the incumbent LECs' ability to respond with prices other than already tariffed rates. Thus, it is essential to meet the competitive neutrality principle that the Commission adopt this tariff relief before any universal service bidding mechanism is initiated.

C. Although GTE Supports The Use Of Competitive Bidding To Choose A Service Provider, The *Recommended Decision's* Administrative Process Is Overly Burdensome And Should Be Modified.

The *Recommended Decision* proposes that: (i) schools and libraries be provided with the "maximum flexibility to purchase whatever package of telecommunications

¹⁶⁰ See *Southwestern Bell Telephone Company v. FCC*, Case No. 95-1592, (D.C. Cir. Nov. 26, 1996).

¹⁶¹ See *Private Line Rate Structure and Volume Discount Practices*, 97 F.C.C. 2d 923, 948 (1984), establishing criteria for competitive necessity showing.

services they believe will meet their telecommunications service needs most effectively and efficiently;" (ii) requesting entities "certify that they have 'done their homework' in terms of adopting a plan for securing access to all of the necessary supporting technologies needed to use the services purchased under section 254(h) effectively;" and (iii) "schools and libraries be required to seek competitive bids for all services eligible for section 254(h) discounts." *Recommended Decision* at ¶¶ 458, 601, 539.

GTE supports these recommendations as a sound method to ensure schools and libraries obtain needed telecommunications services at the lowest possible price, and can efficiently use such services. However, GTE urges the Commission to adopt final rules that modify the proposed administrative process and to clarify the manner in which a winning bid will be selected.

1. **If an Internet web site arrangement does not allow potential bidders to perform electronic searches, direct notification to all eligible service providers should be required.**

The *Recommended Decision* (at ¶ 539) proposes "that schools and libraries be required to submit their requests for services to the fund administrator, who would then post a description of the services sought on a website for all providers of services to see and respond to as if they were requests for proposals (RFPs)."¹⁶²

¹⁶² In GTE's view, the fund administrator should approve the amount of discount for which a school or library is eligible based upon the certification document before any service provider is asked to bid. This would eliminate activity that would be wasted if a school were to find it could not fund the unsupported portion. Further, if the size of the school and library portion of the universal service fund is insufficient to meet all requests in a given year, the administrator could take steps, following guidelines established by the Commission, to determine which requests are to be fulfilled.

Under certain circumstances, use of an Internet web site could offer an effective means of soliciting bids. Providing that the web site offers the ability to perform searches, or to automatically forward bid requests based upon zip codes or other criteria predetermined by potential bidders, carriers interested in offering services to schools and libraries to only specific geographic areas could efficiently learn of the opportunity to bid.

If, however, a web site is not implemented in a manner that allows electronic searches or automatic retrieval of bid requests, schools and libraries should be required to also provide other forms of notification to maximize the number of bids. For example, the *Recommended Decision* (at ¶ 602) finds merit in the "proposal that schools and libraries submit their requests for services in writing to all service providers certificated by the state public utilities commission to serve the area in which the school or library is located." Schools and libraries also routinely solicit bids through newspaper and trade journal publications. The FCC should incorporate in its final rules a requirement that requesting entities provide the fund administrator with the information needed for a web site, and provide other formal notifications of the opportunity to bid, e.g., a written request to all certificated service providers or newspaper advertisements.

Such a requirement would lead to more competitive bidding activity. Requiring the requesting entity to notify all eligible telecommunications service providers would ensure that all firms are aware of the opportunity to bid. If an RFP were only on a web site that did not have automatic notification capability, each and every service provider would have to dedicate resources for scanning the site on designated days to determine which of the many RFPs are within the area it desires to offer service.

Moreover, such a process would not unduly burden requesting entities. Most requesting entities are already familiar with the majority of telecommunications service providers in their locale, and each state regulatory agency can provide the most up-to-date information. The only additional burden on schools and libraries would involve copying and postage.

2. The bidding process should require the requesting entity to select the winning bidder.

The Recommended Decision is not clear as to which entity is recommended to review and select the winning service provider. The language within paragraph 539 could be interpreted as requiring the fund administrator to select the winning bid. However, paragraph 549 appears to contemplate a school making "informed knowledgeable choices," and also recognizes that many schools routinely seek competitive bids today. Similarly, paragraph 572 expects that a school would use "the best negotiated contract rate for which they can bargain in the market as the pre-discount price to which a discount would apply."

GTE recommends the Commission require the requesting entity to choose the winner, rather than the fund administrator. Each school or library will examine its existing facilities and capabilities, compare those with its desired goal, and create a plan to reach the objective. A package of telecommunications services that will enable achievement of the goal will be needed and will serve as the basis for the RFP. A central administrator cannot become intimately familiar with the nuances of each school's circumstances, or the possible trade-offs offered by bidders, and thereby

cannot possibly determine the best fit.¹⁶³ Only the individual school or library can efficiently make this determination.

3. The service provider should have the option to receive full payment for the provided telecommunications services directly from the requesting entity.

The *Recommended Decision* also proposes (at ¶535) that schools and libraries only pay the carrier a discounted rate, and that the carrier may obtain the amount of the discount from the universal service support fund administrator.¹⁶⁴ This method is uniquely burdensome on service providers and should not be the sole method of compensating service providers.

Under the scheme proposed by the *Recommended Decision*, carriers interested in bidding on supported services would be forced to: (i) make major modifications to their customer records and billing systems to accommodate unique charges for commonplace services to many different billing entities; (ii) send two discrete bills for a single service, or alternatively, to create mechanisms to track and accumulate the amount of charges to all schools and libraries served for the purpose of rendering a single bill to a fund administrator; and (iii) accept the inevitable time lag between rendering a bill and obtaining payment from the fund administrator for services

¹⁶³ For example, a bidder could offer an alternative package of service, or a different technology, that would achieve the desired result and be the lowest price. Only the requesting entity would know if it had the other capabilities that might be needed to make use of the alternative offered.

¹⁶⁴ Section 254(h)(1)(B)(i) of the 1996 Act allows a service provider the choice of receiving a direct payment, or obtaining a credit towards that providers universal service support obligation.

rendered. These additional administrative costs could discourage firms from bidding, thereby limiting the number of potential bidders.

The Commission can avoid this outcome by adopting rules that allow a service provider to choose either the proposed method or to obtain full compensation directly from the school or library. With the latter option, the fund administrator would disburse funds equal to the discount amount it authorizes directly to the school or library.

No additional administrative burdens would be created by this option. Rather, the administrative costs now contemplated to be imposed solely on service providers would be applied instead to the cost-causer. Schools and libraries would not be unfairly burdened by such a process because they: (i) are, after all, the cost-causer; (ii) will have a working relationship with both the fund administrator and the service provider; (iii) will already be capable of providing a payment to the service provider each month, and (iv) would simply increase the size of the normal monthly payment to the service provider.

Further, the fund administrator will be required to make a payment to someone, and it is no more difficult to send a payment to the school or library than it would be to the service provider.¹⁶⁵ Although the absolute number of checks or bank wire transfers would be increased, the fund administrator would have a much clearer linkage (for audit purposes) between the entity receiving the payment and the services being provided.¹⁶⁶

¹⁶⁵ Further, schools and libraries commonly deal with requests for and receipt of government loans, grants and other aid programs.

¹⁶⁶ Under the scheme proposed by the *Recommended Decision*, the service provider would have to notify the fund administrator of the school's identity, and the fund administrator would somehow have to verify the amount authorized.

It is also clear that the fund administrator will be required to be ready to randomly audit requesting entities, and such audit could incorporate oversight of disbursement of funds.

Thus, GTE recommends that this additional payment option be made available to carriers that provide telecommunications services to schools and libraries.¹⁶⁷

D. The *Recommended Decision's* Proposed Method Of Determining The Discount Percentage For Eligible Schools And Libraries Should Be Revised.

Throughout the *Recommended Decision*, the Joint Board seeks to act in a fiscally responsible manner, and to carefully target support where it is needed.¹⁶⁸ GTE commends the Joint Board for these prudent and responsible recommendations, and urges their adoption by the Commission. However, GTE is concerned that the proposed reliance on the national school lunch program as the measure of economic

¹⁶⁷ GTE also urges the Commission to adopt a similar provision for receipt of compensation for service provided to rural health care entities, and to reject the *Recommended Decision's* proposal (at ¶ 716) that only an offset mechanism be adopted. Use of only an offset mechanism will not accommodate service providers that select only rural health care providers as their target customers because they would have little, if any, other revenues against which such an offset could be applied.

¹⁶⁸ For example, eligibility criteria for low-income individuals should be based "solely on income or factors directly related to income (such as participation in a low-income assistance program);" schools and libraries should: (i) seek competitive bids for services eligible for discounts, (ii) have "done their homework" to ensure support monies are effectively used, and (iii) pay at least a portion of the cost of supported telecommunications services to maximize "cost-effective operation." *Recommended Decision* at ¶¶ 425, 539, 601, 551. Further, the *Recommended Decision* concludes (at ¶ 565) that adopting a measure of need based upon "the wealth of students enrolled in school will more accurately reflect the level of economic disadvantage in all of the schools and libraries eligible for universal service support under section 254."

need of a school or library is not consistent with the other fiscally responsible proposals because it does not use means-testing as the eligibility metric.¹⁶⁹

Under the National School Lunch Act, 42 U.S.C. §§ 1751-1769h, students may qualify for free and reduced-price lunches if their family income is below 130 percent or 185 percent, respectively, of the applicable family size income levels contained in the nonfarm income poverty guidelines prescribed by the Office of Management and Budget.¹⁷⁰ Each student's eligibility for a free or reduced-price lunch is determined on the basis of a complete application filled out by an adult member of the household.¹⁷¹ Local food authorities are under no obligation to verify data contained in a student's application unless they are compelled to do so by Department of Agriculture regulations.¹⁷² Although the Department of Agriculture sends each state a sample application form that the state can provide to local food authorities,¹⁷³ this application form does not require any verification of income other than the signature of the parent,

¹⁶⁹ *Recommended Decision* at ¶¶ 564-566. GTE has previously provided data to the Commission showing that the single state where GTE operates that uses self-certification for eligibility for Lifeline-type service has more than three times the number of participants than any other state, even though the average household income in that state is among the highest in the nation. *See, GTE's D.95-115 Comments* at 46, Attachment D. While these statistics cannot be said to give proof of widespread fraud, they do indicate that the Commission should approach any plan based solely upon self-certification with a great deal of caution.

¹⁷⁰ 42 U.S.C. § 1758(b)(1)(A).

¹⁷¹ *Id.* at § 1758(b)(2)(C).

¹⁷² *Id.*

¹⁷³ Attachment 3 is a sample of the National School Lunch Program form.

and local food authorities are not forced to use the federal form.¹⁷⁴ Such self-certification provides no method for determining whether the federal funds are properly targeted to those most in need.

In response to the Joint Board's openness to "other approaches that may also prove to be both minimally burdensome for schools and libraries and accurate measures of economic disadvantage,"¹⁷⁵ GTE recommends that the Commission adopt an approach wherein support is based upon direct measures of the underlying economic wealth of the geographic area served by the school or library. Income statistics available through Census Bureau could be used for this purpose. A great deal of information about income levels and the number of children of school age within small geographic areas is readily available from the Census Bureau.¹⁷⁶ The underlying data could be obtained by a universal service fund administrator and used to determine the economic circumstances of the students in each school district. This source has the advantage of being readily available from an expert governmental agency, and requires

¹⁷⁴ GTE has anecdotal evidence that administration of the school lunch program is informal at best. While the forms used by some schools ask the parent to provide a food stamp or Aid for Families with Dependent Children case number, no formal proof is requested. The only requirement is a parental signature "certifying" that the parent meets the necessary criteria to qualify a child for the national school lunch program. Also, some school administrations encourage children to obtain a parent's signature, and emphasize the importance of the child obtaining a healthy lunch, while de-emphasizing the eligibility criteria. Although these practices apparently comply with the letter of the National School Lunch Act, they are likely to be an inaccurate basis on which to target universal service funds.

¹⁷⁵ *Recommended Decision* at ¶ 564.

¹⁷⁶ Attachment 4 shows the type of detailed Census Bureau information available on the Internet.

only minimal, one-time activity by a school or library -- identification of the geographic areas used by the Census Bureau that are included within the school's serving area, based upon information provided by the fund administrator.

This method could also facilitate provision of support to non-public schools that do not use the national school lunch program.¹⁷⁷ Use of this measure would also simplify determination of which schools should be eligible for an additional discount percentage due to the high cost nature of the geographic serving area.¹⁷⁸ Moreover, assuming that the Commission adopts use of the CBGs, or aggregations of CBGs, for determination of high cost eligibility, those two components of the fund administrator's activities would be in conformity.¹⁷⁹

Respectfully submitted,

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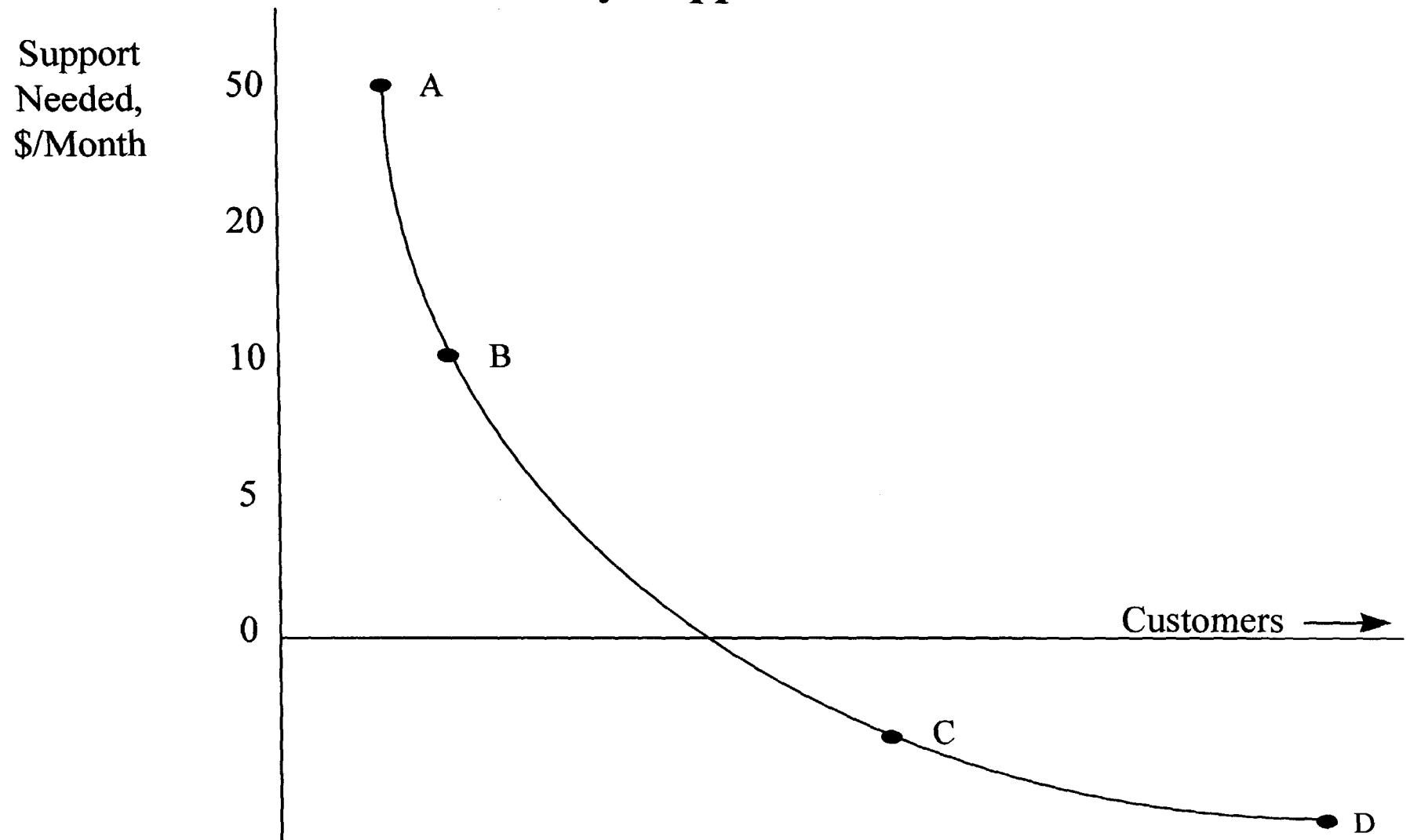
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¹⁷⁷ *Recommended Decision* at ¶ 564.

¹⁷⁸ *Recommended Decision Public Notice* at Question 3.

¹⁷⁹ *See Recommended Decision* at ¶¶ 175-178.

Ordering of Customers within a Service Area, By Support Need



ATTACHMENT 2

**The Hatfield Associates Model Cannot Be Used
To Determine The Cost Of Providing Universal Service.**

Hatfield Associates, Inc. of Boulder, Colorado, have developed a cost proxy model ("HA Model"). It was created to estimate the extent of geographic cross-subsidization in connection with universal service proceedings, and was initially funded by a consortium of companies, including Incumbent Local Exchange Carriers ("ILECs") and Alternative Local Exchange Carriers ("ALECs"). All participants, other than AT&T and MCI, have since dropped out of the effort. The HA Model is now being promoted by AT&T and MCI as an accurate predictor of the cost of unbundled network elements.

Due to a plethora of design, data, and theoretical flaws, the HA Model is not fit for its intended purpose. It is result driven and consistently spins out unrealistically low costs and rates. The Hatfield rate for basic residential service is typically one third to one half of a ILEC's actual costs, and equally below comparative residential service rates generated by other cost models. Its own proponents have admitted that the HA Model probably does not permit certain ILECs to recover their costs.¹ Were the HA Model used as a basis for pricing network elements, no rational CLEC would ever consider entering the market as a reseller, even at wholesale discount rates of 20-25 percent. It would be far less expensive for a market entrant simply to purchase all of the ILEC's unbundled elements and then repackage them. Needless to say, facilities based market entry would be significantly discouraged.

¹ Testimony of Thomas Krafcik, Docket No. PUC 960117, Tr. at 1357 (Virginia State Corporation Commission, November 26, 1996).

The Hatfield Model is Entirely Conceptual and Ignores Market Realities

The critical defect of the HA Model is that it ignores the ILEC's actual costs and existing physical plant, even though its purpose is to establish rates for interconnection with that existing network. Rather, the HA Model estimates costs based upon a hypothetical and futuristic telephone system. It begins with the assumption that the ILEC's present facilities and assets -- loops, end office and tandem switches, interoffice trunks, Signaling System 7 facilities, distribution facilities, and drop lines -- even poles, ducts, and rights of way -- will be abandoned. In its place will be created instantaneously an entirely new telephone system utilizing the most streamlined distribution routes, the most efficient technology, and, of course, the lowest possible costs. In so doing, the HA Model charges today's telephone companies with the obligation of 20-20 hindsight. Even if the existing carrier made the correct and prudent decision -- whether design, technical or purchase -- 10 years ago (or even 10 days ago), if there exists a cheaper alternative today that would better fit today's circumstances, the HA Model will disregard the higher costs that were expended in the past (or committed to be spent in the future).

Under the Hatfield paradigm, incurred costs are presumed embedded, and hence unrecoverable. As a general matter, the existing ILEC will be permitted to recover only a small fraction of these costs. This is because the Hatfield modelers mistakenly believe that a fictitious new entrant with a more efficient network will immediately drive market prices down to its lowest cost. In fact, competitive markets don't work that way because it makes no sense for new entrants with a lower cost structure than an incumbent to price at their break-even cost.

By way of example, the HA Model assumes that the cost of burying a telephone cable is \$2.00 per linear foot. In establishing its proposed rates for the unbundled loop, the HA Model will credit the ILEC with only 1/3 of those costs.² Why? Because the HA Model also assumes that, in the future, the telephone distribution structure will be shared with the distribution structures of two other utilities, principally electric power lines and cable television lines. This assumption may be appealing in theory; but it is not the way the telephone system is presently configured -- or probably will be configured in the future. As a practical matter, telephone lines are usually buried separately, and cable lines are rarely buried with power lines.

The Hatfield Model Ignores Growth

Conversely, while the HA Model professes to consider only "forward looking" technology, it remains, by design, an entirely static mechanism. It does not even attempt to forecast growth. It sizes the network to meet today's demand, and assumes that the cost of future expansion (and costly reconfiguration) will be incurred by future generations. Again, this is not how the real world works. When an ILEC wires a new area, it will assess the surrounding demographics. If substantial growth is anticipated, the system will be sized accordingly. But the Hatfield modelers assume that the cost of building and maintaining spare capacity for future expansion should not be considered. Long term growth is viewed as a future cost which should have no bearing on present price of the elements. According to one of the Hatfield modelers, to permit an ILEC to

² Hatfield Model 2.2.2 Input Summary, p. 22. (Exhibit A)

recoup its costs of building a network to accommodate future growth would give them "a license to steal."³

This view, however, ignores the fact that the ILEC is the carrier of last resort. It has the obligation to design a system to accommodate everyone -- even those in sparsely populated areas. If a system is undersized, the ILEC will be expected to remedy that problem in the future. If the ILEC guesses wrong, and fails to adequately plan for new developments, it will bear the significant costs of reengineering and rewiring. The ILEC has no choice but to consider future growth.

The Hatfield Model is Not Reliable

Quite apart from these fundamental theoretical defects lies the fact that the HA Model is virtually impenetrable. Its data sources and logic functions are difficult to ascertain, and many algorithms are password protected. In reality, it should not even be classified as a cost model, as it relies upon a series of EXCEL spreadsheets, with almost three million cells dependent in its calculations. It is virtually impossible to trace the path of a calculation through the various spreadsheets. Evaluating the HA Model is made even more difficult since new versions of the HA Model continue to be generated, the most recent of which was released on August 26, 1996. Indications have been given that a further revised version will be released in the future.⁴

³ Testimony of Robert E. Mercer, Hatfield & Associates, Docket Nos. 16300 & 16355, Tr. at 1462 (Texas Pub. Util. Comm., November 4, 1996).

⁴ Testimony of Robert E. Mercer, Hatfield & Associates, Deposition, Docket Nos. 16300 & 16355, Tr. at 24-33 (Texas Pub. Util., Comm., October 24, 1996).

The HA Model's present iteration, Version 2.2.2, has proven to be highly unreliable -- beset by a series of logic and input errors. In the recent state arbitration proceedings, many modeling, programming, and data problems were exposed -- and acknowledged. Basic arithmetic errors were admitted.⁵ It is undisputed that the HA Model is inconsistent, and violates two basic microeconomic principles. The first is the principle of linear homogeneity; if all prices are increased proportionally, total costs will increase by the same proportion. The second is the derivative property; the percentage increase in total costs as a consequence of a fixed percentage increase in the price of one input will be exactly equal to the share of total costs directly attributable to that input. The HA Model fails on both theoretical grounds.

State commission staff members have become increasingly alarmed and suspicious. Commission staffers who have attempted to run the HA Model and to discern its various modules have discovered additional design and data flaws. Some filed their own data requests, asking the Hatfield proponents to inform them of the "bugs" in the HA Model and the effect of these errors on proposed rates.

The HA Model Has Been Criticized and Rejected by State Regulators

Those state commissions that have undertaken any detailed analysis of the HA Model have rejected it, both as a mechanism to establish universal service obligations and to price the elements of the unbundled network. The California Public Utilities Commission recently rejected the HA Model over one proposed by Pacific Bell in its Universal Service proceeding, noting that many of the Hatfield assumptions cannot be

⁵ Testimony of Donald Wood, ARB 9, Tr. 187-188 (Oregon Public Utilities Commission, November 21, 1996).

verified and that it selectively relies on cost studies from other jurisdictions.⁶ More recently, the Massachusetts Department of Public Utilities rejected the HA Model in an interconnection arbitration proceeding, finding that its network design was "unrealistic." It further stated that the HA Model has "the clear potential . . . to present skewed results with regard to local loop plant investment" and that its configuration of outside plant is "unverified and without support."⁷

Even when the HA Model has been used to estimate certain elements of the unbundled network, it is because the competing cost studies were deemed to have their own flaws -- and not because the HA Model was found to be reliable or accurate. In its interconnection order, the Massachusetts Department reviewed arbitration decisions of other state commissions, "and [could] find only two instances in which the Hatfield Model was adopted." Id. at 23. In Iowa, the HA Model was adopted, but no reason was given other than the fact that it was publicly available and could be verified. In Minnesota, while the HA Model was chosen over the ILEC's cost study, it was not because Hatfield proved to be a more reliable predictor of TELRIC costs, but because the ILEC's calculation of common costs was not accepted.

No state commission has embraced or approved the underlying theory, design, or assumptions of the HA Model, and those that have considered the Model in any depth

⁶ Public Utilities Commission of the State of California, Docket No. R-95-01-02, ALJ Decision of August 8, 1996, Decision No. 96-10-0-66, adopted by Commission October 25, 1996.

⁷ Commonwealth of Massachusetts, Department of Public Utilities Arbitration Order in NYNEX, AT&T, MCI Consolidated Proceedings, December 4, 1996, at 21. (Exhibit B)

have rejected it. As the Massachusetts Department stated: "We find that it has not been demonstrated that the Hatfield Model presents a good representation of a reconstructed local network, and we therefore conclude that it should not be used in this proceeding." *Id.* at 26.

The state regulators that have rejected the HA Model have done so wisely and prudently. The HA Model has never been externally validated. It has never been used to establish universal service obligations or to establish rates for interconnection or unbundled network elements. Asking a telephone regulator to adopt the HA Model would be akin to asking the Federal Aviation Administration to approve for passenger use (and passengers to board) an airplane that has never before been tested or flown.

Hatfield's Costs Are Far Below Those of Competing Cost Proxy Models

The proposed rates generated by the HA Model are far below those produced by any other cost model under consideration by either the FCC or the Joint Board. A recent edition of Telecommunications Reports contrasted, on a state by state basis, the loop costs generated by the HA Model with those generated two other models: (1) the Cost Proxy Model (CPM) sponsored by Pacific Telesis (and adopted by the California Public Utilities Commission in its Universal Service Proceeding); and (2) the Benchmark Cost Model 2 (BCM2), sponsored by U.S. West and Sprint Corporation. The CPM and BCM2 models produced similar results. (Nationally, BCM2 was 10.9% lower than CPM.) The loop costs of the HA Model, however, were substantially below both comparative proxy

models. Depending upon the state, the HA Model generated loop costs that were between 47% and 67% lower than CPM estimates.⁸

Recently, a nationally respected public policy research firm, Strategic Policy Research, Inc. (SPR), released a new study of total element long run incremental costs.⁹ This study produced cost estimates far higher than those generated by the HA Model, and embodied in the now stayed FCC proxy rates. The SPR study estimated loop costs that were 72% higher than the FCC proxy rates. It also estimated switching costs that were 34% higher than FCC proxy rates. According to SPR, these new data points should serve as a "reality check" on the proxy models currently being considered in state and federal regulatory proceedings.

SPR calculated a national loop charge estimate of \$24.56, which compares with the Hatfield national estimate of \$13.84. Several important factors account for this discrepancy in loop costs, the HA Model: (1) ignores categories of indirect costs; (2) deliberately excludes costs essential for conducting business (e.g., customer contacts); (3) uses loop cost ratios based on Ameritech data (which has relatively shorter loops and lower costs); and (4) does not attempt to model future growth. Id. at 21.

With regard to switching costs, SPR could not explain why its estimates -- based upon actual reported costs -- were three times higher than those yielded by Hatfield. The explanation of the Hatfield proponents -- that competition will lead to increased efficiencies -- can hardly account for a discrepancy of this magnitude. As SPR notes,

⁸ Telecommunications Reports, October 28, 1996, p. 19. (Exhibit C)

⁹ A New Set of Tops Down Incremental Cost Measures, November 17, 1996, Strategic Policy Research, Inc., Bethesda, Maryland. (Exhibit D)